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ABSTRACT

Examining some of the cognitive tools accompanying development of oral language in young children--tools that are somewhat suppressed with literacy development--can lead to educational principles that transcend the traditional focus on either the knowledge base or the child's mind. Of particular importance are the use of stories to give affective meaning to events, the use of binary oppositions to provide an initial grasp of phenomena, and engagement with fantasy, and the use of rhyme and rhythm. Rhythm and rhyme helped languaged people without writing to preserve their knowledge base and stimulate vivid mental images. Just as stories served as a bond for languaged people to tie themselves into complex societies, they provide young children the security of knowing how to feel about what is being learned. During young children's language development, oppositions are created from continua of size, speed, temperature, and morality. However, with discrete categories such as life/death, human/animal, and human/machine, invented mediations between these categories lead to fantasy stories and myths. The early grasp of metaphor and punning is an essential part of understanding jokes common to young children's oral culture. Focusing on these cognitive tools of development leads to principles of children's learning: (1) children are abstract as well as concrete thinkers; (2) children's thinking is powerfully affective; (3) children readily understand content organized into story forms; (4) children are readily engaged by forming images from words; (5) children are prodigal producers and consumers of metaphors; (6) children's learning is stimulated by rhyme and rhythm; and (7) children's learning can proceed by forming binary oppositions and mediating them. These learning principles are used to construct the story form planning framework, focused on seeking the affective meaning within curricular content. An example of how this model might be used within early environmental education includes identifying the emotional importance of the individual's environmental impact and exploring binary opposite feelings about the environment. If early education focuses on the development of oral cultural cognitive tools, it will enrich the experience of being human. (Contains 17 references.) (KB)

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The cognitive tools of children's imagination

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Introduction

Having outlined this paper, I considered how best to introduce its main themes, especially as I had given it a suspicious title. I came up with three different introductions, and spent some time deciding which would be best. Each seemed to help bring to the fore a particular dimension of the general argument. After some indecisive time I decided that I might as well give all three introductions––as long as I keep them brief enough.

Introduction 1 takes us back about 300,000 years. According to our current knowledge of the evolutionary story, it seems that our hominid ancestors around that time experienced the last major spurt in brain size. Clearly these larger brains were proving of significant competitive advantage to their possessors, and so the size of brain was increasing rapidly. But this created a major problem for our ancestors, especially for the women. The problem concerned the architecture of the female pelvis; to what degree could the pelvis be widened to enable birth of these larger brained babies while also allowing the women to be able to walk fast? There would clearly come a point at which widening the pelvis would prevent women also being swiftly moving bipedal creatures.

The evolutionary solution to this problem was for humans to give birth to their babies with immature brains and to let the babies' brains grow outside the womb. Our chimpanzee cousins have, at birth, brains of about 350 c.c. and during the rest of their lives their brains grown by about 100 c.c. Human babies are born with much the same sized brains as chimpanzees', but the normal

human brain grows by well over 1,000 c.c., most of that growth occurring by age five.

During those five years, human infants learn some remarkable things. Most of that rapidly growing brain seems to be associated with our quick facility in recognizing and using symbols, most elaborately and plainly evident in our learning and using language. But learning language is only a part of our oddity in the natural world. Indeed, our learning of language and symbol-use in general is so powerfully over-determined in our early years that we cannot not learn a language if we are brought up in a normal language-using environment. We are, as Geoffrey Deacon has put it "idiots savants" of symbol use (1998). We cannot, or can with only immense effort, evade the shaping of our consciousness that language forces on us. As the Chinese sage, Chuang Tzu, jokingly put it: "How I wish that I could meet a man who has got beyond words, so that I might have a word with him" (1996).

One of my central themes, then, is the nature of this shaping of our early consciousness that language forces on us, and some of its implications for how we might better educate our young.

Introduction 2 begins with an observation of Plato's. He tells the story of the Egyptian god Thot trying to persuade the greater god Thamus that the latter should give some research and development money to Thot so that he might develop his great invention of writing. He outlined all the advantages of writing, but Thamus was adamant that writing would be a disaster for humankind. He argued that:

> The discovery of the alphabet will create forgetfulness in the learners' souls, because they will not use their memories; they will trust to the external written characters and not remember of themselves. Your invention is not an aid to memory...you give your disciples not truth, but only the semblance of truth; they will be the hearers of many things and they will learn nothing. Plato: Pheadrus.

In education today we tend to think of literacy as an unquestionable good. But Thamus makes a point that I think we should pay more attention to. That is, that literacy has psychological costs as well as the more obvious benefits. We are so attuned to the benefits, and how hard it is to ensure that children get them adequately, that we tend to ignore the costs.

In this paper I will be attending to some of the cognitive tools that come along with the development and use of oral language. They are cognitive tools that are often somewhat suppressed with the development of literacy. I will be arguing for their independent importance in the cognitive tool-kit of humankind, and will also give a warning about how we can easily introduce literacy in ways that suppress some of these oral capacities and, as a result, diminish children's imaginations.

Introduction 3 invites you to imagine that you are in a completely dark cave. In your hand you have a walking stick. You are having to move forward, and are feeling your way with the stick. You poke the ground and feel that there is something soft over there, perhaps moss, or perhaps it is more crumbly, so more likely mushrooms, and over here you feel hard, uneven flinty rock, and so on.

This is an example used by Michael Polanyi (1967) to illustrate how remarkable humans are in their use of tools. We extend, as it were, our senses through our tools, and, reciprocally, incorporate our tools into our bodies. We imagine that we feel the cluster of mushrooms or flinty rock, but, of course, what we feel is simply the impress of the stick against our hand.

What we may see in this very crude example is just a small index of the way our minds incorporate our cognitive tools. We incorporate language, for example, so completely that we find it hard to imagine what it might be like to be human and conscious of the world without language. Such efforts of the imagination ensure that we are fascinated by cases of feral children, such as that of Victor, the Wild Boy of Aveyron, as described by J.-M.-G. Itard (17??).

This strange incorporation of cognitive tools has also, incidentally, left us a little bewildered about how to describe the growth of the human mind in its process of education. We have had two very general ways, or traditions, of trying to describe it. One of these ways derives from Plato's astonishingly original account, largely given in his Republic. To simplify not a little, he argues that the mind is essentially made up of the knowledge that it learns; that is, the mind is primarily an epistemological organ. If you want to educate someone, then, you must attend carefully to the kind of knowledge that shapes the mind to perceive what is real and true about the world. The amount and quality of what the individual learns determines how well educated the person is. Certain forms of knowledge can carry the mind to rich understanding of the world and of human experience, and these forms of knowledge should determine the curriculum for the young whom we want to educate.

The second general way of trying to describe the development of the mind derives in significant part from the work of Jean-Jacques Rousseau. He tended to see the mind as somewhat like the body; that is, as the body grows through regular stages, so too the mind has its own spontaneous developmental process. So he conceived of the mind as a psychological organ, much in the manner that we most commonly think of it today. To educate someone adequately, it is necessary to understand the mind's spontaneous developmental process, and build our curriculum to support that.

Now, needless to say, these are simplistic caricatures, but not, I think, false for that. We can see these two competing ideas at the center of continuing arguments between the groups we call "progressivist" or "modern" educators and "liberal" or "traditional" educators; between "subject-centered" and "child-centered". These are tired old terms, but we can't get too bored with them until we have worked out a way to get beyond the dilemma they have posed for us for more than two hundred years now. It is not a matter of finding a balance between them, because they are fundamentally incompatible ideas--a topic I won't pursue here (but see Egan, 1997). Neither of these traditions, I will argue, has been adequate in helping us educate children. Both have provided useful guidance to the educator, of course, but both have also misled educators somewhat about children's minds. Neither, for example, has been good at helping us understand such prominent features of children's thinking as are evident in their imaginative activities and fantasy lives.

This dilemma forms an introduction to this paper because I want to show how we might transcend it by focusing neither on knowledge nor on the child's

mind. Rather, following Vygotsky's lead, I will focus instead on the cognitive tools that children pick up as they grow up in society. That is, we will think of the mind as a socio-cultural organ, and see what the results can be for early education.

Kinds of understanding

My work, for a while, has involved exploring how we might reconceive education if we look closely at the main cultural tools that children pick up as they grow within modern societies. I have focused particularly on the main linguistic tools, and then tried to analyze the sets of sub-tools that come along with them. These sets of tools give us, I argue (1997), somewhat distinctive kinds of understanding. I have suggested we might distinguish five such kinds of understanding. The first I call Somatic. This is pre-linguistic and determined by the kind of body and senses we have. These deliver a distinctively human "take" on the world prior to, and subsequently underlying, later language developments. That is, for all our later cognitive tools development, we remain creatures whose understanding of the world is profoundly shaped by our particular kind of bodies and senses.

The second kind of understanding I call Mythic, and it is a product of learning to use an oral language. A sub-set of the cognitive tools that come along with oral language is the main subject of this paper. Universally, in all human cultures, the development of oral language involves a set of cognitive tools, such as the use of stories to give shape and affective meaning to events, the use of binary oppositions to provide an initial grasp on phenomena, an engagement

with fantasy, and the use of rhyme, rhythm, and meter for increasing the memorability and impact of utterances. So I will consider what stories are and why they engage children so powerfully, why children are so attracted to fantasy, why they enjoy rhythmic language, why forming their own images from words is so important, why emotionally charged binary oppositions are so prominent in their imaginative lives (security/anxiety, courage/cowardice, love/hate, etc.), and then go on to show how these cognitive tools of oral language can be used in designing lessons and units of study in the everyday classroom.

The remaining kinds of understanding need not detain us here. The Romantic is a product of learning literacy within a western cultural context, the Philosophic is a product of learning the fluent use of theoretic abstractions, and the Ironic is a product of learning how to use languages' reflexiveness for complex communicational purposes.

The oral culture of childhood and the poetics of memory

If you live in an oral culture, you know only what you can remember. Languaged people without writing need to preserve their store of knowledge, feelings, hopes, and fears in living memories. To do this most effectively--oral cultures discovered long ago--people learned to deploy a set of techniques that were a part of language itself. So rhyme and rhythm could help the process of remembering: "Thirty days hath September/ April, June, and November . . . " is one hold-over in English that compactly contains a lot of information about how many days there are in each month in an easily memorable form. If one does not

have writing, the preservation of lore in the living memory leads to a mind that re-sounds with a store of rhymes and rhythms.

The need to preserve lore in the memory also led to the discovery that language could be used to stimulate vivid images in the mind, and lore coded into such images was more easily remembered and so reliably preserved across generations. Generating images from words seems invariably to involve some emotional component (Warnock, 1976)--which helps to account for the greater richness we typically experience from generating our own images from text or listening to an oral story than from seeing images presented to us on film or television.

I will explore these and some other characteristic cognitive tools of oral-language thinking below. I will focus particularly on the nature and uses of stories, fantasy, metaphor formation, and binary oppositions.

What is a story?

Stories are unique kinds of narratives in that they have, in their basic forms, ends that satisfy some tension generated by their beginnings. They can thus fix the hearer's affective orientation to the events, characters, ideas, or whatever, that make them up. They allow us the satisfaction that life and history--which are, without the stories we try to lay on them, just one damn thing after another--deny us. The story was perhaps the most important of all social inventions, in that it provided the bond for languaged people to tie themselves into more complex societies than extended kin-groupings,

emotionally committed to shared social and cosmic stories. Stories, basically, are little tools for orienting our emotions.

So a compact answer to the question about the nature of stories is to say that they are narrative units that can fix the affective meaning of the elements that compose them. That is, a story is a unit of some particular kind; it has a beginning that sets up a conflict or expectation, a middle that complicates it, and an end that resolves it. The defining feature of stories, as distinct from other kinds of narratives--like arguments, histories, scientific reports--is that they orient our feelings about their contents. The stories that most engage young children have some characteristics that are commonly different from those that engage adults, but the form of the story seems to be a cultural universal. The engaging quality of stories seems tied up with the fact that they end. Unlike history or our lives, in which succeeding events compel us constantly to reassess our feelings about earlier events, the story fixes how we should feel, and this provides us with a rare security and satisfaction. Particularly for young children, it seems, this security of knowing how to feel about what is being learned is an important component in making things meaningful; what is learned within a story is "affectively meaningful."

The structure of children's fantasy

If we consider the kinds of fantasy stories young children are most powerfully engaged by--and it is a rare adult who does not recall in detail, say, Cinderella, while the same adult may remember nothing of the more "relevant", "issues-oriented" stories read to them as children--we may see that their underlying structure is usually a simple binary conflict based on security/fear, courage/cowardice, good/evil, and so on. Now so much has been written lately

about binary opposites, critical of their pernicious influence, that we need to be careful in pointing out that the generation of opposites and mediating between them seems to be basic to human thinking when shaped by language (though possibly more pronounced in some languages than in others.). (For a discussion of this issue, see Egan, 1997, Chs. 2 and 6.) Three simple observations might be made about these binary structures; first, they are abstract, second, they are affective, and, third, they can "expand" understanding to anything in the universe that can be organized in terms of their basic affective concepts.

Their abstractness perhaps merits emphasis in the face of the near-ubiquitous assertion in education that young children are "concrete thinkers". That young children do not commonly use abstract terms explicitly does not mean that they do not constantly use abstractions in their thinking. Indeed, one might reasonably make a case for "the primacy of the abstract" (Hayak, 1970) and for children's ability to make sense of the concrete only to the degree that the concrete elements are tied to some affective abstraction (Egan, 1989).

The point about the binary oppositions and mediation is that once you grasp from experience such oppositions as solitude/company, for example, you can make sense of a solitary like Obi-Wan Kenobi in Star Wars. That is, you don't need to "expand" the child's horizons gradually from something familiar till you can make star warriors, monks, or witches meaningful; they can be grasped directly in terms of such abstract binary terms.

Children themselves support the claim that fantasy has a special attraction for them. When asked what kinds of stories they like best, typical groups of first-graders name a wide variety of stories. But the top preferences, recorded in a

wide survey of some years ago, were for "an animal who could talk," "a prince and a princess," and "a magic ring." Least favorite were real-life stories about "what an astronaut does," "a person on T.V.," and "building a bridge" (Favat, 1977).

Fantasy just comes along with language. That is, fantasy is primarily a product of the languaged mind, and so we might look at early language development for clues as to where fantasy originates.

Consider how young children begin to gain a languaged grasp over the world. The toddler is sitting in a high-chair and touches a cup of milk directly from the refrigerator. Fingers are withdrawn with a frown. "Cold," says the mother. Attracted by an open fire, the toddler walks towards it until the father puts out a protective arm. "Hot," says the father. Children first notice, necessarily, temperatures that are hotter and colder than their bodies, and typically begin their languaged grasp over temperature with words like "hot" and "cold." The child can then learn a word like "warm"--that comfortable temperature about the same as the body's own. Putting a cautious toe or finger towards the bath water, the child can announce "hot!" if it is too hot or "cold!" if it is too cold, and the parent can encourage the child with assurances that it is just beautifully "warm." Further temperature terms, such as "cool' or "pretty hot" can be learned to fit along the continuum from hot to cold.

This way of learning to grasp the world in language and concepts is clearly very common. Young children first learn opposites based on their bodies--"hot" is hotter than the body, "cold" is colder; "big" is bigger than their body, "small" is smaller; "hard" is harder than the body, "soft" is softer; and so on. Young children learn a great deal about the world using this procedure--wet/dry,

rough/smooth, fast/slow, and so on. Once they have formed an opposition, they can learn other terms along the continuum between such opposites.

While they are very young, most children learn that some things are alive, like us and the cat and birds, and other things are dead. Perhaps it might be the death of a pet, or a dead bird brought into the house by a cat, or perhaps the idea of death might be learned through a story or by the experience of their own or a friends' grandparent or great-grandparent dying. Most of us learned the opposition life/death long before we can remember.

What do you get when you apply to those opposites the same procedure that has been so successful in gaining a conceptual grasp over the physical world? What fits between "life" and "death," as "warm" fits between "hot" and "cold"? Well, ghosts, for example. Ghosts are to life and death as warm is to hot and cold. A ghost is a mediation between life and death; ghosts are in some sense alive and in some sense dead.

When children are three or four years old, they might tell their cat or pet rabbit all their secrets. But the animal will not tell them its secrets back. Or, at least, it will not tell them in the language the child uses. Some cultures would put this differently, of course. Some cultures do claim that animals communicate with humans. But all cultures recognize a fundamental distinction between human and animal. Human/animal, like life/death, are opposites that do not have a mediating category; they are not ends of a continuum, but discrete concepts. So what do we get if we try to mediate between them, if we treat them as though they are not discrete and <u>are</u> ends of a continuum? Well, we get creatures like mermaids, Yetis, Big Foot--those half-human, half-animal

creatures that are so familiar to the Western imagination and that are common in the mythologies of all oral cultures.

A two-year-old may stub a toe against a chair and, in pain, hit the chair, only to be in more pain. It becomes clear very early that chairs don't have intentions or feelings like the child's. If we take a toddler for a stroll in the woods, the child comes to recognize that a tree that has fallen over and has saplings growing out of it is a natural object. But the tree that has had a bench carved into it so that weary toddlers and their grandparents can sit and rest for a few minutes has been culturally transformed. Before we can remember, we distinguish at a profound level between nature and culture. Typical three-year-olds will not use terms like "nature" and "culture," of course, but "made" or "real" or some other terms will reflect their recognition of the distinction. So what do you get when you mediate between this further discrete opposition, nature/culture? Well, for one thing, you get Peter Rabbit. That is, you get all those talking, dressed, middle-class animals of children's fantasy stories--natural animals mixed with the archetypal cultural capacity of language-use. Peter Rabbit is to nature and culture as a ghost is to life and death or warm is to hot and cold.

If we listen to toddlers' stunningly rapid language development--from eighteen months to adolescence the average child learns a new word every few waking hours--we may notice a common, powerful, and very successful procedure in use for elaborating a conceptual grasp over the world around them. Oppositions are created from continua of size, speed, temperature, texture, and

also, of course, of morality--so we get good/bad, love/hate, fear/security, and so on. The world is inconvenient in facing us with such discrete categories as life/death, human/animal, nature/culture, and, in the modern world, human/machine. What one finds in the invented mediations between these categories are the stuff of all the fantasy stories and myths of the world, from zombies to werewolves to talking ravens, and from Frankenstein's monster to Mr. Data of Star Trek.

Metaphor and Image

A further element of young children's oral cultural life is their easy use and understanding of metaphor: "I wanted to play after dinner but mom killed that idea." Gardner et al. (1979) report that nursery school children are much more likely than older children to complete with a metaphor a sentence of the form "He looks as gigantic as _____." This ready and early grasp of metaphor, and punning, is prerequisite to, and an essential part of, understanding the kinds of jokes that are a vivid part of young children's oral culture: "What did the dentist say when his wife baked a pie?" "Can I do the filling?" "Why was the farmer cross?" "Because someone trod on his corn." "How do you make a potato puff?" "Chase it around the garden" "Where do you find chili beans?" "At the North Pole." "Knock, Knock." "Who's there?" "Beets." "Beets who?" "Beats me, I just forgot the joke." "What colours would you paint the sun and the wind?" "The sun rose and the wind blew."

It seems important to recognize the centrality of metaphor in children's intellectual lives because so much research on children's thinking deals only with those logical tasks which are more easily grasped by currently dominant research methods. It is those logical tasks that children deal with least well, but early on they show remarkable ease, facility, and flexibility in dealing with the more

complex logic of metaphor. We can program computers to deal with the most sophisticated logical operations, but cannot make much progress at all in programming them to recognize or deal with metaphors. This ease with metaphor is also important because it seems tied to the active, generative, imaginative core of human intellectual life. There is in metaphor a logic that eludes our analytic grasp. Metaphor does not reflect the world, but is crucial to generating novel conceptions of it. In Max Black's words, "it would be more illuminating . . . to say that metaphor creates the similarity than to say it formulates some similarity antecedently existing" (Black, 1962, p. 83).

Gradual expansion from the known to the unknown?

It is commonly claimed that we must start teaching with what is already well known by the student, and build new knowledge on that basis. "If I had to reduce all of educational psychology to just one principle, I would say this: The most important single factor influencing learning is what the learner already knows. Ascertain this and teach him accordingly" (Ausubel, 1968, p. 18). I think there are four reasons why we might be wary of accepting this principle. Here are four things that might cause us to worry about it:

First, if this is a fundamental principle of human learning, there is no way the process can begin.

Second, if novelty is the problem for human learners--i.e., things unconnected with what is already known--reducing the amount of the novelty doesn't solve the problem. And if we can manage some novelty, why can't we manage more?

The third objection is less directed at the principle than at the way it has been, as far as I can see, invariably interpreted in education. It is assumed that what children know first and best is the details of their everyday social lives. That is, it is assumed that children's thinking is simple, concrete, and engaged with their local experience. But children also have imaginations and emotions and these, too, connect with the world. If children's minds are supposed to be restricted to the everyday details of their social lives why are they full of monsters, talking middle-class rabbits, and titanic emotions? We cannot sensibly explain Peter Rabbit's appeal in terms of its "familiar family setting" (Applebee, 1978, p. 75), when it involves a safe forest and a dangerous cultivated garden, and death so close, and so on.

Fourth, and this appeals to old-fashioned intuition, a few moments' reflection should make clear that no-one's understanding of the world expanded and expands according to this principle of gradual content association.

Implications for teaching

By focusing on cognitive tools development rather than knowledge or psychological development, the principles of children's learning I have sketched above seem quite a little different from those one most commonly sees recommended to us by educational psychology textbooks. Just to sketch quite casually some of alternative principles so far indicated, we might prefer to accept the following:

1. children are abstract as well as concrete thinkers;
2. children's thinking is powerfully affective;
3. children readily understand content organized into story forms;

4. children are readily engaged by forming images from words;
5. children are prodigal producers and consumers of metaphors;
6. children's learning is stimulated by rhyme and rhythm;
7. children's learning can proceed by forming binary oppositions and mediating them.

There seem to be significant implications for teaching that follow from these alternative principles. The first implication, to quote the title of a book we seem to remember seeing somewhere, is that one might begin to think of "teaching as story telling." This is not to suggest that we should spend our time telling children lots of fictional stories, though more emphasis on such stories may be one result of this alternative approach, but rather that we think of the content of the curriculum more as great stories to tell than as objectives to attain. We might, then, think of "story" much in the sense a newspaper editor asks a reporter "What's the story on this?" That is, we will not look for a fiction related to the content but rather seek out the affective meaning--the emotional resonance--within the content.

So, instead of using a planning model derived from Ralph Tyler's (1949) useful, but industry-influenced (Callaghan, 1962), objectives-content-methods-evaluation scheme, we might construct an alternative model derived from some of the principles sketched above.

The Story form planning framework

1. Identifying importance

What is emotionally important about this topic? What is affectively engaging about it?

2. Finding binary opposites

What binary concepts best capture the affective importance of the topic?

3. Organizing the content into a story form

3.1 First teaching event

What content most dramatically embodies the binary concepts, in order to provide access to the topic? What image best captures that content and its dramatic contrast?

3.2 Structuring the body of the lesson or unit

What content best articulates the topic into a clear story form? What vivid metaphors does it suggest?

4. Conclusion

What is the best way of resolving the conflict inherent in the binary concepts? What degree of mediation is it appropriate to seek? How far is it appropriate to make the binary concepts explicit?

5. Evaluation

How can one know whether the topic has been understood, its importance grasped, and the content learned?

Let me give a quick example of how this model might be used, taking an example from a book written by three Australian teachers who have been using the model for a few years (Armstrong, Connolly, & Saville, 1994). Among the units of study they outline in the book is one on the environment.

They identified the importance--the emotional importance to them and to the children--in the sense that what the individual does make a difference to the environment, and that the environment they influence is the one they will grow old in and the one they will pass on to their children.

The binary opposites they identified, based on their exploration of their feelings about the environment, were despair and hope.

They began organizing the content into a story structure by choosing something that provided a dramatic exemplification of those binary opposites. They used the book and video The Man Who Planted Trees by Jean Giono. It tells the story of Elzéar Bouffier, who, over a lifetime, filled a whole region with hope by his solitary efforts to reforest a desolate area of the French Alps. From this beginning they built activities and knowledge that conveyed an understanding of the environment by constantly contrasting hope with despair. They included in the process a a project designed to improve a local area of despoiled scrub land.

As they regenerated the waste land, the students felt the hope that working along with nature can give, and recognized that over the years what they had done would have significant beneficial consequences. Their purpose was less mediation than the confirming of hope. The unit of study also involved personal development activities, science and mathematics, language, and other arts, all integrated into the single extended story about human hopes and despairs concerning the environment.

Evaluation was based on the students' grasp of the story of regeneration they played a part in, the clarity and accuracy of their predictions for the results

of their work, discussion of their emotions and thoughts about their work, their enthusiasm, commitment, and involvement, their ability to extract relevant information that would have practical beneficial effects, their ability to present this in confident and competent oral and written forms, and their ability to cooperate in a group to achieve agreed on goals.

The trouble with this model, without more examples than I can give here (but see Egan, 1988, 1989), is that it is difficult to begin by locating within oneself something affectively engaging, something emotionally moving, about the content. Yet it is only by connecting with that emotional association that the content can be made meaningful and engaging to children. The affective engagement with content does not go away as we grow older. The model draws attention to those characteristics that we share with young children--even if our emotional and imaginative grasp on content will often be less vivid. The model tries to make these elements central for us to focus on when planning. It also, far from incidentally, suggests that the beginning of our own thinking about planning teaching be tied up with our affective life and imagination.

Conclusion

I have tried to move from very general theory to an example of practice showing how early education might be influenced by our thinking in terms of the oral cultural cognitive tools that young children pick up as they grow into modern societies. Those tools are closely tied up with what we call, rather vaguely, the imagination. If we think of early education as primarily concerned with the

development of these cognitive tools, we will, I think, enrich for many children the experience of being human.

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